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Epistemology Without Intuition

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Abstract: *From Plato to present, intuition plays a central role in epistemology. My concern in this paper is with the nature and epistemic status on intuition. To that end, I will be reviewing both Bealer's and Wittgenstein's accounts of intuition. I will be arguing that by 'intuition' Bealer understands modal intuition that has Platonic and metaphysical roles. Subsequently, I shall also show that although Wittgenstein's view avoids these two issues, it amounts to the idea that intuition is a normative activity with a dialectical value. As a result, Bealer and Wittgenstein are right, then intuition should no more have any epistemic and evidential role.*

Keywords: *Intuition, Platonism, Modal and Metaphysical Truths, Normative a priori, Epistemic or Evidential Role.*

1. INTRODUCTION

Since antiquity, philosophers discussed mathematical questions related to metaphysics and epistemology such as the nature and knowledge of mathematical entities. In addition to that, they debated the nature, methodology, logical and constitutional nature of mathematics. As a result, they brought the philosophy of mathematics into existence. Since its advent, this branch of philosophy occupied a special place in some form or the other across philosophical discourses. Whether it is with reference to Pythagoras, or Plato, or Aristotle, or Leibniz, or in the more recent times with philosophers like Frege, Russell, etc., the issues of philosophy of mathematics never completely receded from philosophical discussions.

However, it was often said that the philosophy of mathematics reached its heyday with philosophers like Wittgenstein, for example, in the 20th century. Intuition was a contractual term in his philosophy of mathematics. Recently, intuition plays a central role in analytic philosophy. Like many recent philosophers, too, George Bealer has come up with a comprehensive and perspicuously defended account of intuition.

In this paper, my concern is with both Wittgenstein's and Bealer's notions of intuition. I will discuss them arguing that if they are right, then intuition should no more have any epistemic and evidential role.

2. GEORGE BEALER'S ARTICULATION OF INTUITION

In a series of publications, George Bealer introduces his view of intuition as an intellectual seeming. The view at hand can be divided into two parts, the nature and epistemic status of intuition.

2.1 The Nature of Intuition

His view regarding the nature of intuition is also dividable into two parts. One is what I call as negative argument through which he tells us what intuition is NOT. On this view, intuition is not belief, inclination to belief, conscious belief raised from unconscious background ones, sense perception, judgment, guess, hunch, memory, common sense, linguistic intuition, conceptual intuition, and report of consistency [1]. The phenomenological character of intuition is what differentiates it from whatever was just mentioned. This is going to be clearer in the second part which I call as a positive argument through which he tells us what intuition IS. He holds that "intuition is an intellectual seeming," where seeming is understood as a unique conscious cognitive/reflective episode [1&2]. In other words, "intuition ... is a sui generis, irreducible, natural ... propositional attitude which occurs episodically"[1&3&4]. By 'intuition', he understands a priori/rational intuition which is different from physical intuition. The difference between them lies in that the former is necessary and the latter is contingent.

2.2 The Evidential Status of Intuition

Bealer articulates two main arguments to support the epistemic value of intuition. One argument is 'The Argument from Evidence' according to which only basic source of evidence is reliable. Intuition is a source as such, because it has a weak modal tie to truth, which means a subject's source is basic if her necessary cognitive conditions were to

process theoretically her deliverances. In that case, “the resulting theory would provide a correct assessment as to the truth or falsity of most of those deliverances” [1]. The second argument, ‘The Argument From Concepts’, explains that a subject’s intuition has such a tie to the truth, because she does not possess her concepts in minimal, weak, undeterminate, or incomplete way [5&1&6]. Instead, she does so in complete, determinate, full/strong and an a priori stable fashion [5&1&7&8].

A few examples will suffice to make us know the kind of intuition he regularly talks about in his writings. Here are some examples. One is “the naive comprehension axiom of set theory” [9&4&1&10]. Second is “mathematical limits” [1]. Another example is “intuitions about simultaneity and Euclidean geometry” [9&4].

3. TWO PROBLEMS

Bealer is considered as the most radical defender of the use of intuitions in recent philosophy. Going through his above summarized account intuition shows that two points are worth emphasizing: First, the previous account tries to explore the nature and epistemic status of mathematical intuition and, viewed in this way, intuition becomes some sort of Platonic entity. Second, he reduces the characteristics of intuition to modality.

Concerning the first point, let us suppose that whatever Bealer account says is true. Still, it can be said that that may have nothing to do with epistemic intuitions, unless, Aristotle, for example, was wrong and, accordingly, all branches of knowledge are expected to have the same degree of mathematical precision. Moreover, the more mathematical the intuition, the harder it is to describe without blundering into Platonism. Those who do not escape the superstition of a separate realm of mathematical abstract entities, fall prey to the Platonism of intuitions. That is, they think there is an objective fact in virtue of which the nature and epistemic value of intuition is determined in advance.

Concerning the second point, Bealer is interested in intuition with modal operator such as necessity, contingency, or possibility. But these operators are just modalities of truth which are pure metaphysical issues. Suppose, for example, we have the following modal: it is necessary that knowledge is justified true belief. In this case, a metaphysician concerns with the operator “necessary.” While an epistemologist concerns with how to get access to know the significance of an intuition as such. For example, do we have a priori or a posteriori to that? The two concerns are so close, but they are surely not the same. If so, Bealer’s emphasizing on the modality of intuitions is just a metaphysical matter of interest, not epistemic. If this is the case with Bealer, let us see how the case with Wittgenstein is.

4. WITTGENSTEIN’S ACCOUNT OF INTUITION

Wittgenstein explains what he understands by the word ‘intuition’ as follows. It is the situation in which one “knows immediately which others only know after long experience or after calculation”. He draws a distinction between two meanings of the term: one is “guessing right” and the other is a mere “guessing” [11]. The former concerns with the synthetic a priori in mathematics. The latter is physical or psychological and relevant to people’s behavior.

4.1 Mathematical Meaning of Intuition

Answering Kant’s question of whether intuition is relevant to mathematics, in *Tractatus*, Wittgenstein, unlike Frege and Russell, clearly states that intuition is needed for mathematics. Nevertheless, unlike Gödel, he does not consider intuition to be derived from a mental faculty of intuition. Instead, he asserts that the source of intuition as such is nothing but language. By linguistic source of intuition he understands human activity of non-experiential calculating procedure. He writes:

6.233 To the question whether we need intuition for the solution of mathematical problems it must be answered that language itself here supplies the necessary intuition.

6.2331 The process of calculation brings about just this intuition. Calculation is not an experiment[12].

This does not only mean that the process of calculation is not based on empirical intuition. Indeed, this is only half of the truth. The other half is that the very process provides the a priori forms of intuition representing the experiential world. I said ‘representing’ and not ‘describing’ because, for him, mathematics does not describe things. Instead, it is the way we describe things. He writes:

6.35 Although the spots in our picture are geometrical figures, geometry can obviously say nothing about their actual form and position. But the network is purely geometrical, and all its properties can be given a priori. Laws, like the law of causation, etc., treat of the network and not of what the network described [12].

His assertion that the process of calculation provides mathematics with the intuitions it needs must be understood as an argument against logicism, the view that reduces mathematics to logic and conceptual analysis. That is, reducing mathematical concepts to logical ones and deriving mathematical propositions from logical principle. For him, reduction as such eliminates an essential characteristic for the understanding of calculus i.e. intuition. Mathematical equation is applicable to logical tautology but tautology cannot provide what calculation can do namely, the intuition that makes us able to understand equation in mathematics. Both equations and tautologies have no thought, but tautologies are senseless propositions and equations are pseudo-ones. In his words:

6.2 Mathematics is a logical method. The propositions of mathematics are equations, and therefore pseudo-propositions.

6.21 Mathematical propositions express no thoughts.

6.22 The logic of the world which the propositions of logic show in tautologies, mathematics shows in equations[12].

To make the sentence 'tautologies are senseless propositions and equations are pseudo-ones' clearer, I clarify that for him, like numerals, equations do not say anything about abstract objects. Equations are between signs that represent them. Signs are equal in value in virtue of rules prevailing repeatable processes. One may speak of them (describing how they are), but cannot make assertion about them (asserting what they are). In other words, "objects I can only name. Signs represent them. I can only speak of them. I cannot assert them. A proposition can only say how a thing is, not what it is" [12]. Yet, it is worth mentioning that Wittgenstein's mathematical terms do not stand for extended objects but to formal and intentional ones like rule and law. On the other hand, tautologies say nothing about objects, but present their logic showing truth-functional processes. They are nonsensical metaphysics [12].

So while vacuous tautologies are restricted to meaningful empirical propositions, equations are not and at least say something. This leads us to his idea of the role of mathematical proposition in empirical reasoning. Instead of asking the traditional questions that concern with the origin of necessary truths and the possibility of knowing them, Wittgenstein's aim is to know in virtue of what a certain proposition is necessarily true. His view is that it is so depending on our usage of it and not in virtue of the role it plays. He writes:

6.211 In life it is never a mathematical proposition which we need, but we use mathematical propositions only in order to infer from propositions which do not belong to mathematics to others which equally do not belong to mathematics. (In philosophy the question "Why do we really use that word, that proposition?" constantly leads to valuable results) [12].

What's more, he criticizes another aspect of logicism whose Platonist view asserts that mathematical propositions concern with ontologically distinct world of truths, truths of abstract entities. Kant has tackled this issue through his synthetic a priori. Wittgenstein rejects it because, for him, mathematical propositions refer neither to abstract nor to empirical entities, nor are they accountable by the law of excluded middle. In addition, mathematical propositions as such do not have a third value. In other words, they are undecidable [13]. Moreover, in *Remarks on the Foundations of Mathematics* (1978) unlike formalists, he argues that mathematical proposition is a linguistic statement which is not about signs but it is a rule for our usage of signs [14]. This leads us to his view he calls as sign-game according to which mathematical propositions may be applicable outside mathematics, but this does not mean that mathematics must empirically be applicable. Mathematics is both pure and applied [14]. The applied aspect makes it as part of the human beings' history [14]. Note that he views mathematical proposition as a linguistic statement. It is safe for that to be interpreted as a manifestation of his deep leading principle according to which philosophical problems are embedded in language. This principle leads us to his anti-foundationalism, the view that the task of language is not to solve the intrinsically fundamental problems in philosophy. Instead, language should be brought back to the life of uncertainty [13].

4.2 Physical Meaning of Intuition

In [14], Wittgenstein continues explaining his view of the use of intuition in mathematics. To that end, he, unlike intuitionists and formalists, expresses a negative attitude toward the notion that “a new insight — intuition — is needed at every step to carry out the order [i.e. proof] ‘-f-n’ correctly.” Nevertheless, he changes his way of expressing, using the word “decision” instead of the word “intuition”, most likely because of its too strong mentalistic content. So this transition is to be understood as an attempt to get rid of the risk of falling into psychologism by establishing it on mental processes. In *Philosophical Investigation*, he seems to criticize the psychologistic aspect implied by the word ‘intuition’ [14]. He maintains the idea that following a rule of succession does not rest on a prior mental grasp of the succession. If so, if the word ‘intuition’ has a psychological meaning, then it must not come into mathematics. What Wittgenstein tries to block is the claim that an intuition as such explains rule-following, or it has a role to play in knowing how to follow a rule.

Moreover, he goes further to discuss the issue at hand, introducing a new key word to that end namely, the term “technique” [14]. In *Lectures on the Foundation*, one may get to know that by the term “technique” he means in particular the technique of counting. He writes: “there is no discovery that 13 follow 12. That’s our technique- we fix, we teach our technique that way” [11]. His key thought is that what justifies the series of natural numbers is not a certain intuition. What does so is the fact that they are already given in the custom or technique of counting. In doing so, he takes up two profound problem namely, a priori/a posteriori and synthetic/analytic distinction. Unlike Platonist picture of ideal abstract objects and Kant’s notion of synthetic a priori, Wittgenstein defends a view I call as normative a priori. That is, it is a type of reasoning related to rules or norms of representing things. For example, a mathematical proposition is a priori, because it is an intelligible description of reality [14]. It is normative, because it is norm of applicable representation; it can be applied to a pyramid [13].

Now when a rule is correctly followed, in virtue of what it got obeyed by people? It is not because of people’s consensus. An agreement about something and its being true are two different things. Nevertheless, a technique should produce consensus. Otherwise it will not be called as measuring. In [13], he holds that people will not correctly apply a rule that looks abnormal to them. Yet, technique cannot be a matter of stipulated convention, because mathematical theorems cannot be true just because of their correspondence to intuition or conventional wisdom. In my reading, he adopted a moderate conventionalism according to which technique is a customary of rules/norms and ways to apply them by community without deriving them from others. If you can imagine mathematics before it got axiomatized by the Greeks, you can understand what he means by technique [14].

5. DISCUSSION

The discussion of Wittgenstein shows that he successfully gets rid of the two mistakes Bealer’s account has namely, Platonism and modalism. It is very obvious that he keeps away from Platonism, asserting that mathematical proposition is not part the alleged world of the truths of abstract entities. Instead, it is a linguistic statement whose truth value is undecidable. And, given his view of moderate conventionalism, he also avoids the questionable metaphysical character Bealer grants to intuition. Nevertheless, as we have seen, in order to avoid synthetic a priori, he invokes the normative nature of mathematics. In doing so, it is not clear whether mathematics is a priori in the traditional sense of the word.

In my view, the normative point shows that he grants intuition only a dialectical value between modal metaphysics and synthetic a priori. Yet, for him, his concept of intuition is that it is part of human mathematical activity, without any epistemic as well as evidential role. In his words, “what interests me is not having immediate insight into a truth, but the phenomenon of immediate insight. Not indeed as a special mental phenomenon, but as one of human action” [14].

6. CONCLUSION

We have discussed both Bealer’s and Wittgenstein’s accounts of intuition. We have seen that while Bealer claims he discusses philosophical intuition, most of his examples are mathematical. However, I have shown how his account amounts to Platonic realm of abstract entities as well as the problem of modal and metaphysical truths. And, it does not amount to epistemological and evidential role of intuition. I wondered whether Wittgenstein’s account of

mathematical intuition may amount to something different, but we have seen that it avoids Platonism as well as the problem of modal and metaphysical truths. But it amounts only to normative a priori kind of intuition, without any epistemic and evidential role. Accordingly, I have come to the conclusion that if Bealer and Wittgenstein are right, then from now onwards intuition is not playing any epistemic or evidential role, nor will be there any difference if it disappears from epistemology.

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